



GPU Nuclear, Inc.  
Route 441 South  
Post Office Box 480  
Middletown, PA 17057-0480  
Tel 717-944-7621

December 12, 1996  
6710-96-2397

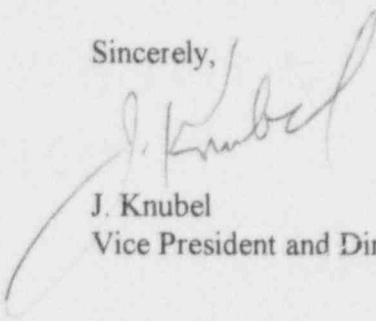
U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555

Gentlemen:

Subject: Three Mile Island Nuclear Station, Unit I (TMI-1)  
Operating License No. DPR-50  
Docket No. 50-289  
Monthly Operating Report for November 1996

Enclosed are two copies of the November 1996 Monthly Operating Report for Three Mile Island Nuclear Station, Unit 1.

Sincerely,

  
J. Knubel  
Vice President and Director, TMI

WGH

cc: Administrator, Region I  
TMI Senior Resident Inspector  
96001

9612190428 961130  
PDR ADOCK 05000289  
R PDR

IE24/1

## OPERATIONS SUMMARY

November 1996

The plant entered the month operating at 100% power and remained at that power level for the remainder of the month. Net unit electrical output averaged approximately 820 MWe during November.

### MAJOR SAFETY RELATED MAINTENANCE

The major safety related maintenance items completed during the month involved the following equipment:

#### Nuclear Services Closed Cooler NS-C-1A

Nuclear Services Closed Cooler NS-C-1A which was removed from service for scheduled maintenance during October. The leak test of the tubes was completed and no leaking tubes identified. However, subsequent Eddy Current testing identified one tube which will be plugged. Sacrificial magnesium anode installation work is in progress and will also continue on into December.

#### Miscellaneous Waste Transfer Pump WDL-P-7A

Miscellaneous Waste Transfer Pump WDL-P-7A was removed from service because of increased mechanical seal leakage. The pump was disassembled and the mechanical seal replaced. The reassembled pump was tested and after it was found to perform satisfactorily, it was returned to service.

#### Integrated Control System Tristable Relay Module 8-5-8

Integrated Control System tristable relay module 8-5-8 was replaced after sporadic spiking was observed. The failed module will be bench tested to determine the cause of failure.

#### Control Rod Drive Cabinet Cooling Fan

A cooling fan in the CRD cabinet for CRD Group 5 failed. The cause of the failure was determined to be bearing failure. A new fan assembly was installed in the cabinet.

# OPERATING DATA REPORT

## OPERATING STATUS

DOCKET NO. 50-289  
 DATE December 12, 1996  
 COMPLETED BY W G HEYSEK  
 TELEPHONE (717) 948-8191

1. UNIT NAME: THREE MILE ISLAND UNIT 1
2. REPORTING PERIOD: NOVEMB 1996
3. LICENSED THERMAL POWER: 2568
4. NAMEPLATE RATING (GROSS MWe): 872
5. DESIGN ELECTRICAL RATING (NET MWe): 819
6. MAXIMUM DEPENDABLE CAPACITY (GROSS MWe) 834
7. MAXIMUM DEPENDABLE CAPACITY (NET MWe): 786

NOTES:

8. IF CHANGES OCCUR IN (ITEMS 3-7) SINCE LAST REPORT, GIVE REASONS: \_\_\_\_\_
9. POWER LEVEL TO WHICH RESTRICTED, IF ANY (NET MWe): \_\_\_\_\_
10. REASONS FOR RESTRICTIONS, IF ANY: \_\_\_\_\_

## THIS MONTH YR-TO-DATE CUMMULATIVE

		THIS MONTH	YR-TO-DATE	CUMMULATIVE
11. HOURS IN REPORTING PERIOD	(HRS)	720.0	8040.0	195025.0
12. NUMBER OF HOURS REACTOR WAS CRITICAL	(HRS)	720.0	8040.0	117583.1
13. REACTOR RESERVE SHUTDOWN HOURS	(HRS)	0.0	0.0	2284.0
14. HOURS GENERATOR ON-LINE	(HRS)	720.0	8040.0	116421.3
15. UNIT RESERVE SHUTDOWN HOURS	(HRS)	0.0	0.0	0.0
16. GROSS THERMAL ENERGY GENERATED	(MWH)	1,847,111.0	20,582,006.4	286,696,932.4
17. GROSS ELECTRICAL ENERGY GENERATED	(MWH)	624,711.0	6,864,929.0	96,318,403.1
18. NET ELECTRICAL ENERGY GENERATED	(MWH)	590,882.0	6,489,087.0	90,532,491.1
19. UNIT SERVICE FACTOR	(%)	100.0	100.0	59.7
20. UNIT AVAILABILITY FACTOR	(%)	100.0	100.0	59.7
21. UNIT CAPACITY FACTOR (USING MDC NET)		104.4	102.7	59.1
22. UNIT CAPACITY FACTOR (USING DER NET)		100.2	98.5	56.7
23. UNIT FORCED OUTAGE RATE	(%)	0.0	0.0	34.2
UNIT FORCED OUTAGE HOURS	(HRS)	0.0	0.0	60761.2

24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE AND DURATION OF EACH):

25. IF SHUT DOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP: \_\_\_\_\_

# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-289  
 UNIT TMI-1  
 DATE December 12, 1996  
 COMPLETED BY W G HEYSEK  
 TELEPHONE (717) 948-8191

MONTH: NOVEMBER

DAY	AVERAGE DAILY POWER LEVEL (MWe-NET)
1	821
2	823
3	824
4	821
5	820
6	815
7	804
8	803
9	819
10	823
11	824
12	824
13	825
14	824
15	825
16	825

DAY	AVERAGE DAILY POWER LEVEL (MWe-NET)
17	822
18	820
19	818
20	821
21	822
22	820
23	822
24	820
25	819
26	818
27	824
28	825
29	825
30	824
31	#N/A

REPORT MONTH November 1996

DOCKET NO. 50-289  
 UNIT NAME TMI-1  
 DATE December 12, 1996  
 COMPLETED BY W. G. Heysek  
 TELEPHONE (717) 948-8191

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	Licensee Event Report <sup>4</sup>	System Code <sup>5</sup> & <sup>6</sup>	Component Code <sup>5</sup> & <sup>6</sup>	Cause & Corrective Action to Prevent Recurrence
						None			

<sup>1</sup>  
 F Forced  
 S Scheduled

<sup>2</sup>  
 Reason  
 A-Equipment Failure (Explain)  
 B-Maintenance or Test  
 C-Refueling  
 D-Regulatory Restriction  
 E-Operator Training & Licensing Examination  
 F-Administrative  
 G-Operational Error (Explain)  
 H-Other (Explain)

<sup>3</sup>  
 Method  
 1-Manual  
 2-Manual Scram  
 3-Automatic Scram  
 4-Other (Explain)

<sup>4</sup>  
 Exhibit G - Instructions for  
 preparation of Data Entry Sheets  
 for Licensee Event Report (LER)  
 File (NUREG-0161)

<sup>5</sup> Exhibit I same source

<sup>6</sup> Actually used exhibits F & II NUREG 0161

### REFUELING INFORMATION REQUEST

1. Name of Facility: **Three Mile Island Nuclear Station, Unit 1**
2. Scheduled date for next refueling shutdown: **September 5, 1997**
3. Scheduled date for restart following current refueling: **NA**
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment? **Yes. To support GPU Nuclear's independent reload analyses for Cycle 12 as discussed in response to Question 6 below, T.S. 6.9.5.2 will require revision to include references to the GPU Nuclear analysis methods applied to the reload.**
5. Scheduled date(s) for submitting proposed licensing action and supporting information: **A Technical Specification Change Request for the changes as discussed above will be submitted once the GPU Nuclear topicals are approved.**
6. Important licensing considerations associated with refueling, e.g. new or different fuel design or supplier, unreviewed design or performance analysis methods, significant changes in fuel design, new operating procedures:

a) GPU Nuclear Letter 6710-96-2092, dated March 28, 1996 confirmed plans to perform independent reload design evaluations for Cycle 12, the next operation cycle, based on NRC approved methods described in GPU Nuclear Topical Reports TR-091A (core physics), TR-087 (core thermal hydraulics), TR-078 (FSAR safety analyses) and TR-092P (design and setpoints methodology) submitted to the NRC. The latter three are in the final NRC approval stage. Issuance of NRC SERs is expected soon.

The GPU Nuclear Cycle 12 reload program and results are expected to be available for NRC review in the March to April 1997 time frame.

b) Cycle 12 fuel rod performance calculations (e.g. internal pin pressure) will be performed by Framatome Cogema Fuels Company (FCF) using the approved TACO3 (BAW-10162P-A) and GDTACO (BAW-10184P-A) fuel codes. Results require minor changes to the Mark B9 fuel rod design (lower fill gas prepressure, increased plenum volume). The new design will meet all fuel criteria in the latest approved revision of BAW-10179P-A, Safety Criteria and Methodology for Acceptable Cycle Reload Analyses. Fuel rod cladding corrosion calculations for all Cycle 12 fuel are being done by FCF using the COROS2 methodology now under review by the NRC. Approval is expected soon. The TACO calculations are being done using power histories generated with the GPU Nuclear approved core physics codes CASMO-3/SIMULATE-3 (TR-091A). Use of the SIMULATE-3 power peaking uncertainty of 5.5% with the TACO methodologies, rather than the current FCF NEMO physics code (BAW-10180A, Rev 1) uncertainty of 4.8%, was approved by NRC on October 4, 1995 for application to TMI-1 only.

7. The number of fuel assemblies (a) in the core, and (b) in the spent fuel storage pool: (a) 177 (b) 864
8. The present licensed spent fuel pool storage capacity and the size of any increase in licensed storage capacity that has been requested or is planned, in number of fuel assemblies:

The present licensed capacity is 1990. Phase I of the reracking project to increase spent fuel pool storage capacity permits storage of 1342 assemblies. Upon completion of Phase II of the reracking project, the full licensed capacity will be attained. Phase II is expected to be started in 2002.

9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity:

Completion of Phase I of the reracking project permits full core off-load (177 fuel assemblies) through the end of Cycle 14 and on completion of the rerack project full core off-load is assured through and beyond the end of the current operating license.